

FEATURES

- > Schottky barrier diodes
- > Metal silicon junction, majority carrier conduction
- > Low power loss, high efficiency
- > High forward surge current capability

TYPICAL APPLICATIONS

For use in low voltage, high frequency inverters, free wheeling, and polarity protection applicaion



MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C unless otherwise noted)

Parameter	Symbol	SS12D	SS13D	SS14D	SS15D	SS16D	SS17D	SS18D	SS19D	SS110D	Unit
	Mark	D12	D13	D14	D15	D16	D17	D18	D19	D110	
Maximum repetitive peak reverse voltage	VRRM	20	30	40	50	60	70	80	90	100	V
Maximum RMS voltage	VRMS	14	21	28	35	42	49	56	63	70	V
Maximum DC blocking voltage	VDC	20	30	40	50	60	70	80	90	100	V
Maximum average forward rectified current	IF(AV) ¹⁾	1.0									A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	25									A
Operating junction temperature range	T _J	- 55 to + 125									°C
Storage temperature range	T _{STG}	- 55 to + 150									°C

Note1): Mounted on PCB with 5.0x5.0mm copper pads.

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	SS12D	SS13D	SS14D	SS15D	SS16D	SS17D	SS18D	SS19D	SS110D	Unit	
Maximum Instantaneous forward voltage	IF=1A, Ta=25°C	VF	0.45	0.55		0.70		0.85				V	
Maximum DC reverse current at rated DC blocking voltage	Ta=25°C	IR	0.5					0.1					mA
	Ta=100°C		20									mA	
Typical junction capacitance	4.0V, 1MHz	C _J	110			80						pF	



RATINGS AND CHARACTERISTICS CURVES (T_A = 25°C unless otherwise noted)

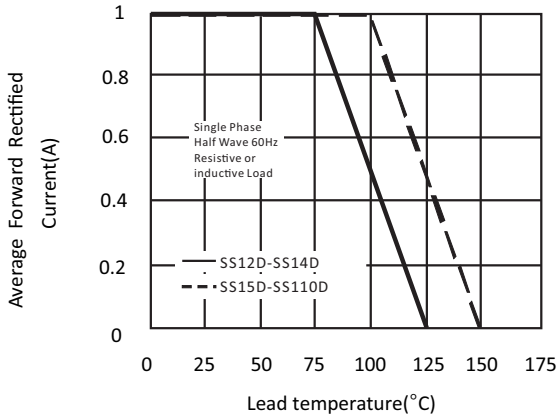


Figure 1. Forward Current Derating Curve

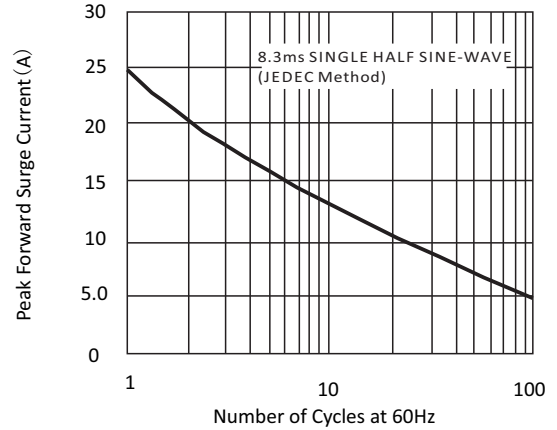


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

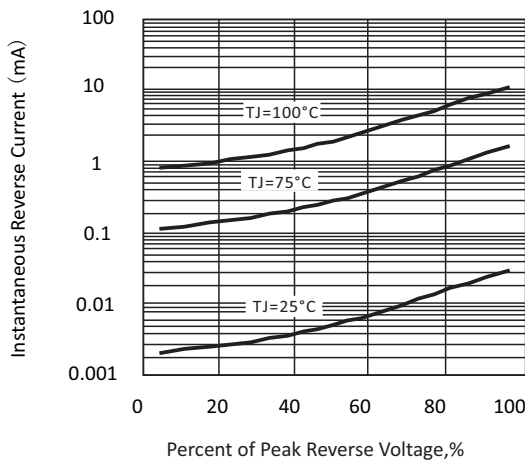


Figure 3. Typical Reverse Characteristics

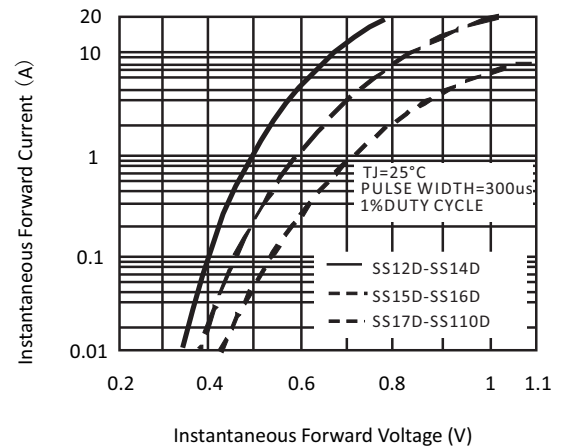


Figure 4. Typical Instantaneous Forward Characteristics

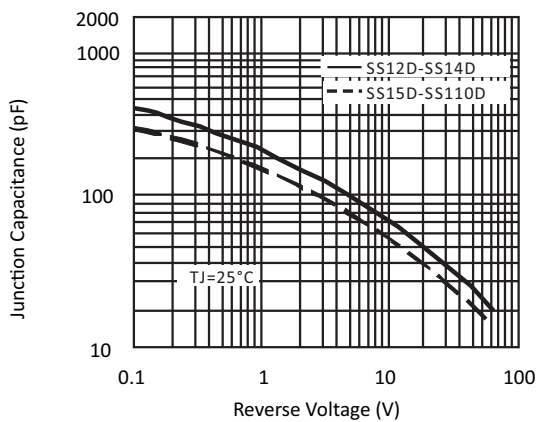
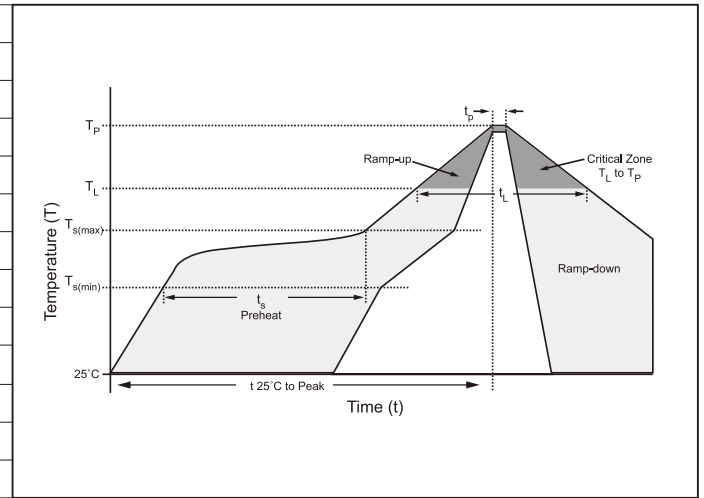


Figure 5. Typical Junction Capacitance

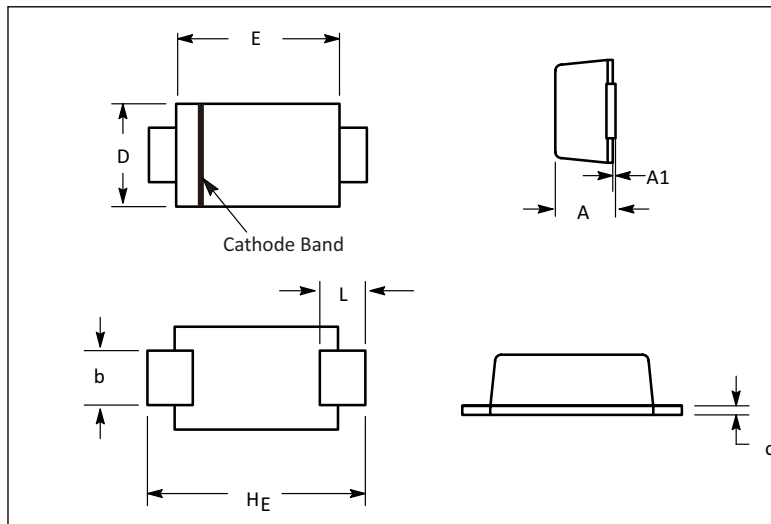


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Min (Ts(min))	150°C
	Temperature Max (Ts(max))	200°C
	Time (min to max) (ts)	60 – 180 secs
Average ramp up rate (Liquidus Temp (TL) to peak)		3°C/second max
Ts(max)to TL - Ramp-up Rate		3°C/second max
Reflow	Temperature (TL) (Liquidus)	217°C
	Time (min to max) (tl)	60 – 150 seconds
Peak Temperature (TP)		260°C
Time within 5°C of actual peak Temperature (tp)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (TP)		8 minutes Max.
Do not exceed		260°C



SOD-123FL PACKAGE DIMENSION

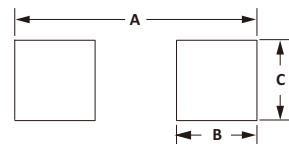


DIM	MILLIMETERS		INCHES	
	Min.	Max.	Min.	Max.
A	0.95	1.45	0.037	0.057
A1	0.00	0.10	0.000	0.004
b	0.70	1.20	0.028	0.047
c	0.05	0.30	0.002	0.012
D	1.50	2.00	0.059	0.079
E	2.50	2.90	0.098	0.114
L	0.35	0.90	0.014	0.035
HE	3.40	3.90	0.134	0.154

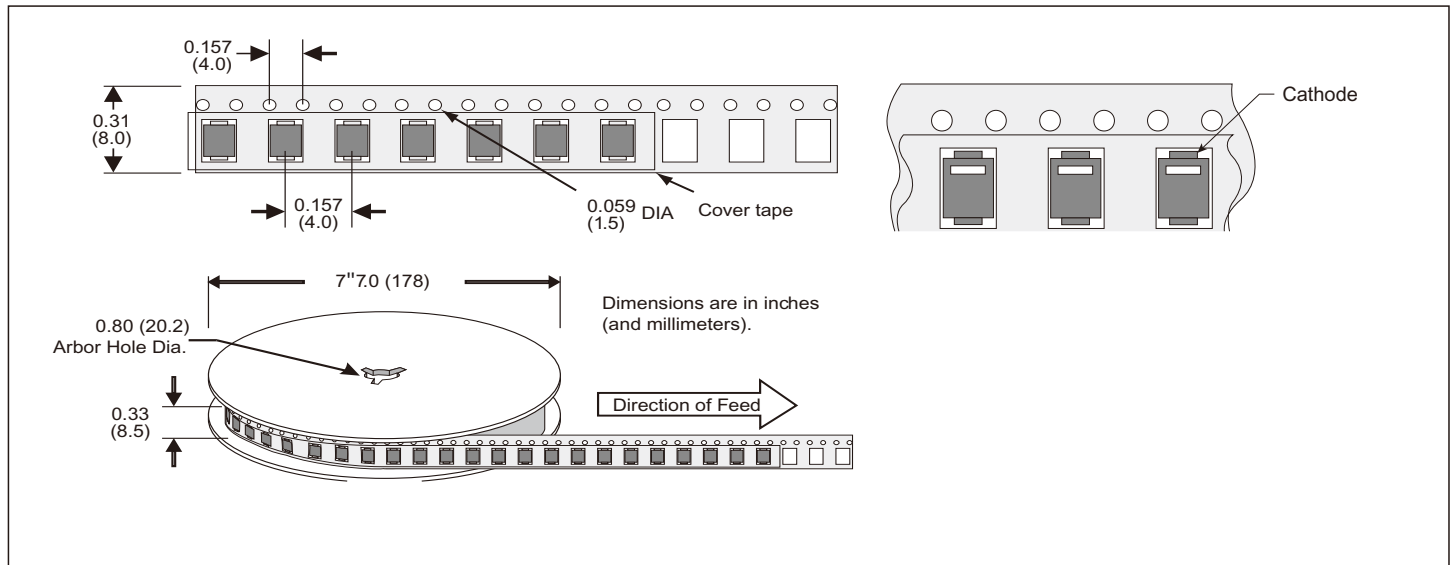
NOTES:
1. Dimensions are exclusive of mold flash and metal burrs

RECOMMENDED PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS	INCHES
A	4.19	0.165
B	0.91	0.036
C	1.22	0.048



TAPE AND REEL SPECIFICATION



ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SS12D thru SS110D	SOD-123FL	3000PCS	7"



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